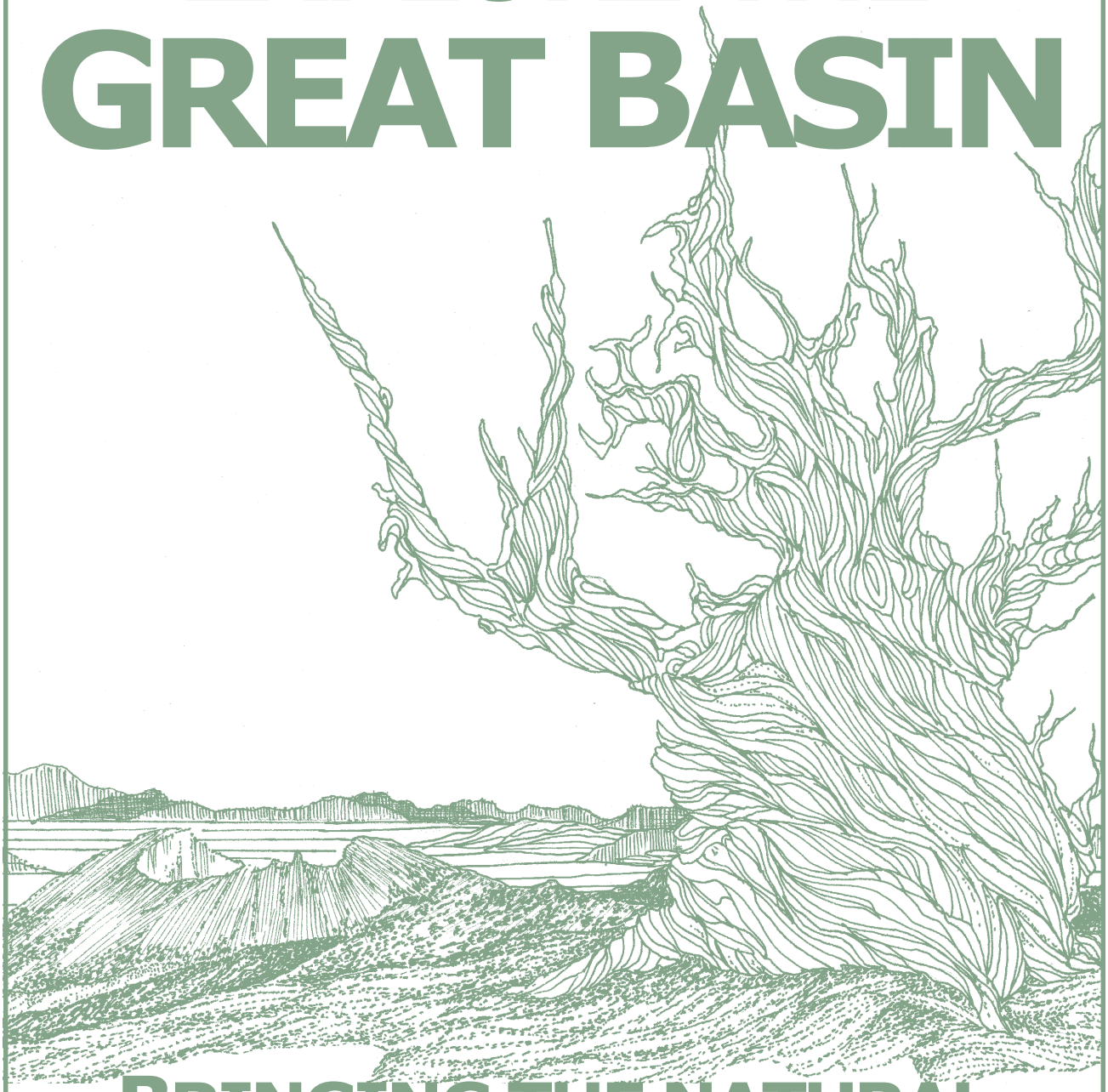
EXPLORE THE GREAT BASIN



BRINGING THE NATURAL AND CULTURAL WONDERS OF THE REGION TO THE CLASSROOM

GREAT BASIN
ASSOCIATION

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Dear Teacher,

We hope you will find this Resource Activity Guide a significant help in teaching students about the Great Basin of the Western United States. We have designed it specifically for teachers of elementary grades four, five and six, but with an expectation that with a little effort, the presentation of information and activities can be adapted for other ages and levels. We plan to revise the Guide in the future and would very much appreciate hearing from you about your experiences using it and your recommendations for its improvement.

The Great Basin is a surprisingly diverse and fascinating place containing multitudes of unique ecosystems within it. The harsh climate of the Great Basin high desert has limited development of this vast, 200,000 square mile area, while the native peoples, plants, and animals, developed brilliant adaptations to survive and reproduce. The land forms and climate have changed dramatically over thousands of years. Huge lakes once separated the more than 200 mountain ranges; now water evaporates or sinks, but does not flow to the ocean.

The Great Basin offers exceptional opportunities for people to learn about the natural world and to reflect on the need for people to adapt to limits created by climate and natural resources in order to live sustainably on our small planet. The region contains pristine air, spacious views, dark night skies, and a remoteness that invites contemplation of the larger universe in which our world revolves and our short lives take place.

We hope this Resource Activity Guide helps you to excite your students about the Great Basin. Enjoy!

Becky Mills
Superintendent, Great Basin National Park

USING THIS GUIDE

The Great Basin is a unique place! The purpose of this guide is to help educators teach children about this spectacular area, whether or not they live in the Great Basin. The activities are designed for grades 4-6, but they can be adapted for younger and older students too. The guide is organized in units, with each unit providing background information and activities for both the classroom and the outdoors. If you are looking for more in-depth information on any of the subjects, use the resources section to identify books and reference materials that will be helpful to you.

The objectives of this guide are to:

- Provide educators with information on the physical, biological, and cultural resources and heritage of the Great Basin.
- Acquaint students with the Great Basin and its unique aspects through hands-on activities.
- Develop within the students an understanding of the value of the Great Basin and an appreciation for the total environment.
- Direct students toward actions they can take to protect the Great Basin and to be stewards of the environment.

We hope that the information and activities provided will help you and your students to develop a sense of this place we call the Great Basin. It is a place where the earth is moving, where numerous and diverse species make their homes, and where cultures have survived and thrived for thousands of years. Go forth and explore!

ACKNOWLEDGMENTS

This resource activity guide is the collaborative effort of many people and organizations. We would like to acknowledge the contributions of all those listed below:

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TELL US WHAT YOU THINK!

After you have used *Explore the Great Basin Educator's Guide*, we would like to hear your comments . We request your help in making this a better program and one that fits your classroom needs. Please take a few minutes to answer the questions in this evaluation and return the evaluation to the address shown on the following page. Your comments and suggestions will ensure that *Explore the Great Basin* continues to be of value to you and your students. Thank you for taking the time to respond to this evaluation and happy exploring!

School Address:

_____

Group Leader or Teacher:

_____

Grade Level: _____

Did you use any of the activities in this guide? Yes_____ No_____
(If yes, please complete the reverse side of this evaluation sheet.)

Did you arrange for a class visit to Great Basin National Park? Yes_____ No_____
If not, would you like information about visiting the park with your class? Yes_____ No_____

EXPLORE THE GREAT BASIN

Please circle your response(s) to the following:

Overall:	**Good**	**Fair**	**Poor**	**Comments:**
Usefulness	1	2	3	_____
Relevance to school curriculum	1	2	3	_____
Quality	1	2	3	_____
Interest Level	1	2	3	_____
Understandable	1	2	3	_____

What are your suggestions for improving this guide?

_____

_____

_____

Feel free to add comments below or attach more comments or suggestions on an additional sheet.

_____

_____

EVALUATION OF ACTIVITIES

Title of classroom activity	Appropriate for your grade level?	Ease of use	Were the concepts conveyed?	Adequate background information?	Would you use this activity again?
1.					
2.					
3.					
4.					
5.					

Please return this evaluation form to:
EDUCATION COORDINATOR
100 Great Basin National Park
Baker, Nevada 89311

THE GREAT BASIN

At first glance, the Great Basin appears to be a desolate landscape not worthy of exploration, but nothing could be further from the truth. Right in our backyard lies a vast natural laboratory. The Great Basin provides significant biological, geological, and cultural resources for you and your students to investigate and learn from. Here we can study anything from global climate change to salt flats to alpine wildflowers to mining history. The rich diversity of this region may be subtle, but from the sagebrush to the mountain tops there are a thousand secrets to discover.

WHAT IS THE GREAT BASIN?

Defining the Great Basin begins with a choice: are you looking at the way the landscape formed (geologic), the way the water flows (hydrographic), or the resident plants and animals (biologic)? Each of these definitions will give you a slightly different geographic boundary of the Great Basin, but the hydrographic definition is the most commonly used.

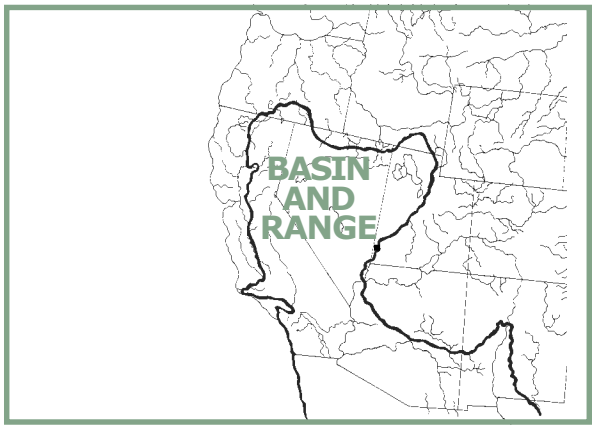
THE HYDROGRAPHIC GREAT BASIN

The hydrographic Great Basin is an approximately 200,000 square mile area that drains internally. Surface water leaves the Great Basin only by evaporation. Creeks, streams, or rivers find no outlet to either the Gulf of Mexico or the Pacific Ocean. All precipitation in the region evaporates, sinks underground or flows into lakes (mostly saline). The boundaries to the west and the east are the Sierra Nevada Mountains of eastern California and the Wasatch Mountains of Utah, respectively. The northern boundary is the Snake River Plain of Idaho and Oregon. The south rim is less distinct. John Fremont, upon naming the Great Basin, believed there was a mountain range to the south. This mountain range proved nonexistent. The Great Basin includes most of Nevada, half of Utah, and sections of Idaho, Wyoming, Oregon, and California. The term “Great Basin” may be slightly misleading because the region is actually made up of many small basins. The Great Salt Lake, Walker Lake, Pyramid Lake, and the Carson and Humboldt Sinks are a few of the “drains” in the Great Basin.

THE GREAT BASIN

THE GEOLOGIC GREAT BASIN: BASIN AND RANGE

The Basin and Range region is recognized by its unusual topography. It is the product of the geological forces stretching the earth's crust, creating many, north-south trending, tilted mountain ranges. These mountain ranges are separated by flat valleys or basins. Across the region are "high, discrete, austere new ranges [that] come in waves, range after range after north-south range, consistently in rhythm with wide flat valleys; basin, range, basin, range; a mile of height between basin and range" (John McPhee, Basin and Range). These hundreds of ranges are what make Nevada the most mountainous state in the country. This geological region encompasses most of the hydrologic Great Basin, as well as parts of Arizona, New Mexico, Texas, and Mexico.



THE BIOLOGIC GREAT BASIN:

The biological Great Basin is defined by plant and animal communities. The climate of the Great Basin Desert is affected by the rain shadow of the Sierra and Cascade Mountains. It is a temperate desert with hot, dry summers and snowy winters. The valleys are dominated by sagebrush and shadscale. The biologic communities on the mountain ranges differ with elevation, and the individual ranges act as islands isolated by seas of desert vegetation in the lower drier valleys.

Because the Great Basin exhibits such drastic elevation changes from its valleys to its peaks, the region supports an impressive diversity of species, from those adapted to the desert to those adapted to forest and alpine environments. The various communities of the Great Basin are described in detail in the Desert Diversity unit.